

CLAIMS

1. A tooth for use in a grinding wheel, the tooth comprising
a main body including a slot comprising two substantially planar surfaces for,
5 in use, engaging with a slot in the rotor,
at least one cutting face connected to and extending away from the main body;
wherein, in use, the force in the plane of the rotor is transferred onto the rotor
via one of the planar surfaces provided on the slot.
- 10 2. A tooth according to claim 1, wherein the cutting face includes at least two tips
which are perpendicular to each other.
3. A tooth according to claim 1 or claim 2, further comprising a channel in its back
face.
- 15 4. A tooth according to any of the preceding claims, further comprising a through
hole that interfaces with one of a plurality of through holes provided in the rotor when
the tooth is located in one of the slots in the rotor.
- 20 5. A grinding unit for use with a grinding machine, the unit comprising:
a rotor having a rim around which a plurality of slots are provided;
a plurality of teeth, according to claims 1 to 4; and
fixing means for retaining each tooth in its associated slot in the rotor.
- 25 6. A grinding unit according to claim 5, wherein the radius of the rotor varies
around the circumference.
7. A grinding unit according to claim 5 or claim 6, wherein the rotor is polygonal.
- 30 8. A grinding unit according to claim 7, wherein the polygon shape is irregular.
9. A grinding unit according to either claim 7 or claim 8, wherein the rotor has an
even number of sides.

10. A grinding unit according any of claims 7 to 9, wherein each slot is provided at a corner of the polygon.
11. A grinding unit according to claim 9, wherein the slots are arranged in diametrically opposed pairs.
12. A grinding unit according to claim 11, wherein the slots in an opposing pair of slots are the same distance from the axis.
13. A grinding unit according to any one of claims 9 to 11, wherein the number of slots is 4, 6, 8, 10 or 12.
14. A grinding unit according to any one of the claims 5 to 13, wherein at least one slot is angled towards the axis of rotation of the rotor.
15. A grinding unit according to any one of claims 5 to 13, wherein at least one slot is angled away from the axis of rotation of the rotor.
16. A grinding unit according to any one of claims 13 to 15, wherein the slots are arranged in two diametrically opposed series, each successive slot in each series having an increased distance from the axis in the direction in which the rotor rotates, in use.
17. A grinding unit according to any of claims 5 to 16, wherein the fixing means is a nut and bolt, the bolt passing through the aligned through holes in the rotor and the respective tooth.